

REMARKS/ARGUMENTS**35 USC § 102**

Claims 19 and 22 were rejected under 35 USC § 102 as being anticipated by Hamada (U.S. Pat. No. 5,200,268). The applicant respectfully disagrees. Nevertheless claims 19 and 22 were amended to even more clearly distinguish the present claims over Hamada.

As amended, claim 19 expressly recites that the "...transfer adhesive is at least one of heat-sensitive and pressure sensitive..." and that the transfer is dried "...such that at least some of the reflection particles are raised above the reflection ink layer...". Similarly, claim 22 specifically requires that the transfer is dried "...such that at least some of the reflection particles are raised above the reflection ink layer...". These elements are clearly not taught by Hamada.

To assist the Examiner in a better understanding of the patentably distinct features of the present claims, it is pointed out that Hamada relates to a transfer sheet comprising a release sheet, a stick-adhesive layer disposed on the releasable side of the release sheet, a main transfer layer disposed on the stick-adhesive layer and a moisture proofing means to maintain the stick-adhesive layer in moisture-free condition. As detailed in column 2, lines 35 to 57, the stick-adhesive layer of Hamada consists of a substance which undergoes spontaneous transition from a sticking agent to an adhesive agent. As a sticking layer would be deficient in bonding strength and a adhesive layer requires additional application of pressure over a certain period of time, Hamada discloses the use of said stickadhesive layer in the process for the manufacture of a screen print transfer, wherein the curing of said sticky stick-adhesive layer occurs upon exposure to moisture. Therefore, in the process for manufacture a screen print transfer, said process of Hamada additionally comprises the application of a protective sheet (e.g. a polypropylene film) to prevent the stick-adhesive layer from curing. The protective sheet covers an area larger than and extending beyond the pattern of the main transfer layer (cf. column 4, line 47 to column 5, line 4).

In contrast, in the process as claimed in claims 19 and 22 of the present invention, a transfer adhesive is applied which is not sticky but a conventional heat-sensitive and/or pressure-sensitive adhesive for screen print transfer systems (typically a hotmelt adhesive). As one of the significant consequences, it should be recognized that no additional protection sheet (layer) has

to be applied to protect the adhesive layer from curing as is the case in Hamada. In other words, the adhesive layer of the present invention is stable when exposed to ambient moisture and temperature. This leads to a much more simplified build-up of the screen print transfer, as in the handling of said screen print transfer no further precautionary measure for securing the stickiness of the stick-adhesive layer has to be taken, so that even the man non-skilled in the art can handle the process and the screen print transfer of the present invention.

Furthermore, Hamada is totally silent about the properties of the applied reflection ink, and especially the composition of said reflection ink layer. It is pointed out that due to the nature of the composition and process of drying (after application of the reflection ink), the reflection particles are raised above the ink layer and are fixed in this position. This leads to the improved reflection properties of the reflection inks. Therefore, the applicant disagrees with the examiners statement that it would be inherent to one of ordinary skill in the art to have Hamada to dry the transfer to insure that the ink particles and transfer sheet are bonded together. The drying step of the present process is no matter of routine but is the cause of the superior properties of the screen print transfer of the present invention.

Finally, concerning the subject-matter of claim 22, it should be noted that Hamada is entirely silent regarding the application of a mixture of a transfer adhesive /reflection ink mixture or a coloured transfer adhesive containing a plurality of reflection particles.

In view of the above, the subject-matter of claims 19 and 22 and consequently of dependent claims 20, 22 and 23-26 is novel over the prior art.

35 USC § 103

Claims 20-21 and 23-26 were rejected under 35 USC § 103 as being obvious over Hamada in view of LaPerre. The applicant again respectfully disagrees for various reasons.

General Remarks: According to the presently claimed subject matter, the problem to be solved by the present application is to create a screen print reflection transfer system and a process for the creation thereof, in which the reflection ink features substantial reflection

properties after the transfer onto the substrate. This done by the process as claimed in claims 19 and 22.

Hamada is totally silent with regard to the improvement of the reflection properties of the reflection ink as claimed in the present application. The skilled man in the art looking for such an improvement would not consider the teaching of Hamada as relevant. Furthermore, LaPerre teaches about glass microsphere coated articles having an extremely smooth tactile feel and a low friction surface. From the teaching of LaPerre, the skilled man in the art could not arrive at the teaching of the present invention.

Inventive step of claim 20: The Examiner states that it would be obvious to one of ordinary skilled in the art to dry the transfer after application of the transfer adhesive avoiding that the ink melts and distorts the image to be printed. The applicant respectfully disagrees. First of all, the Examiner makes this assertion without citing any motivation or suggestion in any prior art. The Examiner's rejection cannot be sustained without more than mere speculation and unsupported allegations. Furthermore, neither Hamada nor LaPerre teaches about drying the adhesive layer before applying the ink layer, let alone drying to achieve positioning of the reflective particles as presently claimed. Therefore, the presently claimed methods cannot be seen as an obvious procedure as it can not be foreseen in which way the properties of the adhesive layer will react in co-action with the other layers of the screen print transfer upon such a drying step.

Inventive step of claim 21: The Examiner is of the opinion that LaPerre teaches about a process where the intermediate ink layer is dried. However, the paragraph cited by the examiner (col. 15, lines 60-66) deals with embossing of the articles and not with any drying procedure of an intermediate ink layer. Furthermore, LaPerre teaches about an optional graphic layer only, which can not be compared to the intermediate layer and which is not dried in the process of LaPerre.

Inventive step of claim 23: In the Office action it is stated that LaPerre discloses in col. 3, lines 23-26 a process wherein a transfer medium is additionally applied to the dried and hardened transfer, as it is claimed in present claim 23. The applicant kindly disagrees. First of all, the

paragraph erroneously cited by the examiner is entirely silent with respect to any transfer medium. The only layer which could be compared to the transfer medium of the present application would be the combination of the support layer/thermoplastic release layer of LaPerre. However, these two layers have a totally different function than the transfer medium as claimed in present claim 23. The support layer/thermoplastic release layer serve to arrange the beads so that the beads will project to the same extent above the surface when the support layer/thermoplastic release layer are removed wherein the transfer medium of the present invention is used to "transfer" the respective printing onto the chosen substrate.

Inventive step of claim 24: The examiner is of the opinion that the subject-matter of claim 24 lacks an inventive step as LaPerre discloses in column 15, lines 10-20 that the transfer adhesive is transparent, colored translucent or full colored, and in particular that it is fullcolor white. Applicant kindly disagrees.

First of all, the paragraph erroneously cited by the examiner is totally silent with respect to the properties of the transfer adhesive. Furthermore, the only layer which might be compared to the transfer adhesive of the present application is the bead adhesive layer of LaPerre. However, first, the bead adhesive layer has a different function than the adhesive layer of the present invention and second, its position is above the optional graphic layer of the transfer of LaPerre, contrary to the transfer adhesive of the present invention. The skilled man in the art searching for an improved adhesive layer would not consider the teaching of LaPerre as the bead adhesive layer of LaPerre would not serve for the intended purpose of the adhesive layer as claimed in the present claims.

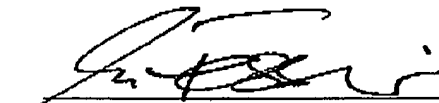
Inventive step of claim 25: The examiner alleges that LaPerre (col. 10, lines 50-58) discloses reflection particles in the same size range as claimed in present claim 25. Applicant kindly disagrees. The glass beads of LaPerre are used for improving the smoothness, the abrasion resistance or the observation angle retroreflectivity. The reflection particles of the present invention, however, are used to improve the reflection properties of the applied ink, i.e. to improve the colour impression. As the particles in both transfers are used for different reasons, the sizes of the particles cannot be compared.

Inventive step of claim 26: The examiner states that the subject-matter of claim 26 is already anticipated by Fig. 2 of LaPerre. Again, applicant kindly disagrees. Fig. 2 of LaPerre is prepared by a similar process as that of Ueda (US 4,849,265). As already stated in a previous correspondence with the USPTO, Ueda and/or LaPerre does not teach to apply a reflection ink comprising a plurality of reflection particles on the underlying structure (either transfer adhesive or optional intermediate ink layer). I.e. the glass beads are sprayed on the adhesive layer of the transfer for improving resistance to weather, water, abrasion etc. and not to form a colored picture which can be applied to any clothing. In contrast, the present invention aims at printing motifs onto a substrate wherein said motifs have improved reflectance properties, i.e. improved colour properties; no improved resistance to weather is intended.

In view of the present amendments and arguments, the applicant believes that all claims are now in condition for allowance. Therefore, the applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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